Preface

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Biographical notes: Subhash Bhalla is a Professor at the Graduate School of Computer Science and Engineering, University of Aizu. His research interests include distributed systems, real-time operating systems and distributed information systems.

Large scale information systems in transportation, banking and public utility services depend on computing infrastructure. Many research efforts are being made in related areas, such as – web-based computing, information accesses by web users, wireless computing and sensor networks. Government agencies in many countries plan to launch facilities in education, healthcare and information support as a part of e-government initiative. In this context, information interchange management has become an active research field. A number of new opportunities have evolved in design and modelling based on new computing needs of the users. Database systems play a central role in supporting networked information systems for access and storage management aspects.

In the same context, the fifth international workshop on Databases in Networked Information Systems (DNIS) 2007 was held on October 17–19, 2007 at the University of Aizu in Japan. The workshop programme included research contributions, and invited contributions. A view of research activity in related areas was provided by special session on the topics. These included, geospatial decision making, web data management systems, networked information systems-infrastructure and web query and web mining systems. Few of the invited contributions have been contributed by Dr. Umeshwar Dayal, Professor Divy Agrawal, Professor Masahito Hirakawa, and Professor Krithi Ramamritham. Revised versions of these and other selected contributed manuscripts have been included in this issue.

The manuscripts in this issue begin by introducing a taxonomy of approaches to preserve location privacy. It concerns location-based services concerning large scale computations. The paper by Ali Khoshgozaran and Cyrus Shahabi presents a model of geospatial decision making system. It presents a novel way to preserve location privacy. Similarly, the manuscript by Arianna D'Ulizia, Fernando Ferri and Patrizia Grifoni, describes a problem of refining user queries in a geospatial decision making context. It considers two kinds of similarity-structural and semantic to resolve references to help the users. Further within the topic of information retrieval the manuscript by Masahito Hirakawa presents a classification of knowledge-based techniques, which rely on semantic aspects. A related paper on query language support using XML by Gao Cong and Yingxin Li presents a method for organising updates using XML views. In the same stream, the paper by Mark Sifer, Frithjof Dau, Helen Hasan, Kate Crawford, Yardena Peres and Yoelle Maarek describes a design for large scale management of data by using XML documents.

Under the network information systems-infrastructure, the manuscript by Khoriba Ghada, Jie Li and Yusheng Ji discusses an optimal control technique for heterogeneous mobile ad hoc networks. Similarly, a large scale public utility service in agricultural area has been described in the manuscript by R. Uday Kiran, P. Krishna Reddy, M. Kumara Swamy and G. Syamasundar Reddy. In the same context of public utility systems, the manuscript by L. Jing, Z. Cheng, and T. Huang presents a location and search system to enhance self-directed education and learning system.

Other than introducing the large scale computing applications, manuscripts focus on presenting a complete spectrum of essential components. These are complex query and support, infra-structural support and upcoming application in large scale computing. The issue also presents novel designs, and algorithmic aspects of supporting large scale computations for modern applications.